

accomplish no good result to enumerate here the imperfections that have come to the notice of the reviewer. And omissions seems to be as scarce as errors.

JOHN HENDLEY BARNHART.

WINTER BOTANY, WILLIAM TRELEASE*

This little book is a companion volume to the author's *Plant Materials of Decorative Gardening* which gives keys for determining trees and shrubs in their summer condition. The present volume gives keys based on twig, bud and leaf-scar characters by means of which practically all of the trees and shrubs, native or cultivated, can be determined in the winter. The key refers to 328 genera and 1100 species and varieties, considerably more than are given in *Plant Materials*, though the evergreens described in that volume are omitted in the present book. With all genera containing more than one species keys are given to the species or varieties.

Necessarily the characters used to separate species are often comparative and so difficult to use where only one form is being traced out. For example it will be difficult to decide whether a twig is "distinctly glandular-warty" or "nearly smooth," or again whether a twig is "moderately slender" or "very slender." In such cases it may be impossible to decide which species one has, but nine times out of ten there should be no trouble. With each genus is a series of drawings showing clearly the determining characters, with the aid of these drawings the user may feel certain of his identification of the genus and often of the species. The characters of the genera are described briefly, but no descriptions of the species are given. This omission is necessary in a book of pocket size that attempts to give so many species.

After each genus, or sometimes after the last genus of a family, page references for each species are given to a number of texts. In some cases these references occupy as much as two pages. As the books referred to are listed in the back these references to species might have been omitted with considerable saving of space. For example, page references are given for every species of

* WILLIAM TRELEASE, *Winter Botany*. Second Edition, Revised, Published by the author, Urbana, Ill. Pages xlii + 396. 1925.

native tree to Blakeslee and Jarvis, *New England Trees in Winter*, similarly for nearly every cultivated shrub or tree given references are made to the pages in Schneider's *Dendrolische Winterstudien*. The names used are those given in Bailey's *Cyclopedia of Horticulture*. For many of the species one, and only one, common name is given, other species have only the scientific name. A freer use of common names and synonyms for frequently used scientific names would have added to the value of the book.

The book will fit the coat pocket comfortably. The dark brown cover offers little contrast to the black lettering on it, otherwise no fault can be found with the appearance of the book as it is well printed on good paper and bound in flexible cloth. Within the limits of so small a book it is surprising how much has been included. The book will prove almost invaluable to those who wish to determine trees and shrubs in winter.

GEORGE T. HASTINGS.

PROCEEDINGS OF THE CLUB

MEETING OF MARCH 10, 1925

This meeting was held at the American Museum of Natural History at 8:15 p.m., with Vice President Richards in the chair. The attendance was 22.

Dr. George H. Shull, of Princeton University, gave a lecture on "Genetical Studies in *Oenothera*."

The lecturer remarked the extensive work which has been done on the genetics of *Oenothera* by de Vries, who is still vigorously engaged at the work which he began 40 years ago, and by numerous investigators who have joined him in recent years, the lecturer's own work having been continued now for a period of 20 years. Examples were given to illustrate the two most fundamental peculiarities of *Oenothera* genetics, the production of unlike reciprocal hybrids and the splitting in F_1 to form the so-called "twin" hybrids.

Diagrams were displayed representing the manner in which two sets of balanced lethal factors account for the fundamental peculiarities of genetical behavior in the *Oenotheras*, the *Lamarckiana* type being characterized by a double pair of zygote lethals which account for the F_1 splitting, the *biennis* type by a